

## A B S T R A C T

To improve the performance for measuring autocorrelation bit errors of optical signals to be measured, an autocorrelation-bit-error detection apparatus of the present invention using an optical branch system first has an optical branch unit for branching an optical signal to be measured into a plurality of branched optical signals, a plurality of light-to-electricity converters for converting a plurality of branched optical signals supplied from the optical branch unit into electrical signals, a plurality of decision circuits for deciding relations between the electrical signals supplied from the light-to-electricity converters and their threshold values, and a detector for detecting autocorrelation bit errors of the optical signal to be measured in accordance with comparison results between the decision circuits.

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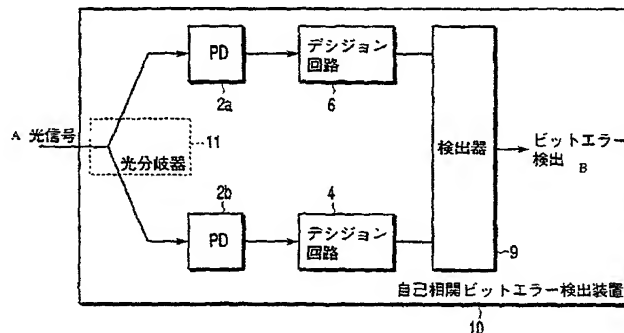
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(54) Title: AUTOCORRELATION BIT ERROR DETECTION DEVICE AND METHOD FOR OPTICAL SIGNAL BY OPTICAL BRANCHING METHOD

(54) 発明の名称: 光分岐方式による光信号の自己相関ビットエラー検出装置及び方法



A...OPTICAL SIGNAL  
11...OPTICAL BRANCHING UNIT  
4...DECISION CIRCUIT  
6...DECISION CIRCUIT  
9...DETECTOR  
B...BIT ERROR DETECTION  
10...AUTOCORRELATION BIT ERROR DETECTING DEVICE

(57) Abstract: An autocorrelation bit error detection device by an optical branching method, comprising, in order to improve a performance in measuring the autocorrelation bit error of an optical signal to be measured, an optical branching unit for branching an optical signal to be measured into a plurality of branched optical signals, a plurality of photo-electric converters for converting the branched optical signals from the optical branching unit into respective electric signals, a plurality of decision circuits for deciding the relations between the electric signals from the photo-electric converters and their respective threshold values, and a detector for detecting the autocorrelation bit error of the optical signal to be measured based on the decided results of the decision circuits.

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